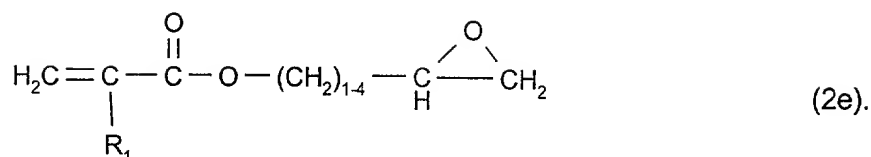
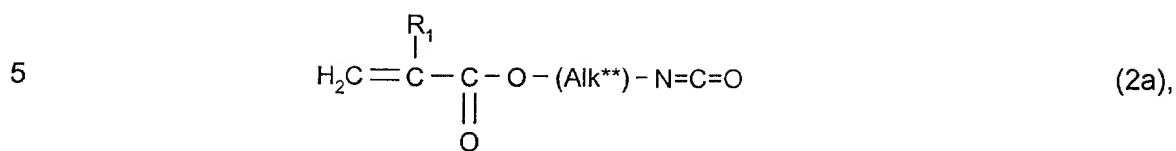


5    **Claims:**

1. A process for coating a material surface, comprising the steps of:
  - (a) applying to the material surface a tie layer comprising a polyionic material;
  - (b) covalently binding a bifunctional compound comprising an ethylenically unsaturated
  - 10    double bond to the tie layer; and
  - (c) graft polymerizing a hydrophilic monomer onto the compound comprising the ethylenically unsaturated double bond.
2. A process according to claim 1, wherein the material surface is the surface of an organic
- 15    bulk material, in particular the surface of a biomedical device comprising an organic bulk material.
3. A process according to claim 1 or 2, wherein the tie layer of step (a) consists of one
- 20    single polyionic material.
4. A process according to claim 1 or 2, wherein the tie layer of step (a) includes at least one bilayer comprising a polycationic material and a polyanionic material.
5. A process according to any one of claims 1 to 4, wherein the polyionic material of the tie
- 25    layer comprises one or more polymers selected from the group consisting of a poly(allylamine hydrochloride), a poly(ethyleneimine), a poly(acrylic acid), and a poly(methacrylic acid).
6. A process according to any one of the claims 1 to 5, wherein the covalent bonding
- 30    between the tie layer and the bifunctional compound comprising an ethylenically unsaturated double bond occurs via reaction of a hydroxy, amino, alkylamine, thiol or carboxy group, of the tie layer with an isocyanato, azlactone, epoxy, carboxy anhydride, carboxy or hydroxy group, of the ethylenically unsaturated compound.
7. A process according to any one of claims 1 to 6, wherein the ethylenically unsaturated
- 35    compound is of formula



10 wherein

R<sub>1</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or halogen;

R<sub>2</sub> is hydrogen, unsubstituted or hydroxy-substituted C<sub>1</sub>-C<sub>6</sub>-alkyl or phenyl;

R<sub>3</sub> and R<sub>3</sub>' are each an ethylenically unsaturated radical having from 2 to 6 C-atoms, or R<sub>3</sub> and R<sub>3</sub>' together form a bivalent radical -C(R<sub>4</sub>)=C(R<sub>4</sub>')- wherein R<sub>4</sub> and R<sub>4</sub>' are each

15 independently hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or halogen and

(Alk<sup>\*</sup>) is C<sub>1</sub>-C<sub>6</sub>-alkylene, and (Alk<sup>\*\*</sup>) is C<sub>2</sub>-C<sub>12</sub>-alkylene.

8. A process according to claim 7, wherein, in step (b), the compound comprising an ethylenically unsaturated double bond is of formula (2a).

- 5 9. A process according to any one of the claims 1 to 8, wherein, in step c), the hydrophilic monomer is selected from the group consisting of acrylamide, acrylic acid, methacrylic acid, hydroxyethyl methacrylate, hydroxyethyl acrylate, methacrylamide, N,N-dimethylacrylamide, allyl alcohol, N-vinylpyrrolidone and N,N-dimethylaminoethyl acrylate.
- 10 10. A process according to any one of claims 1 to 9, wherein in step (c), the monomer comprises one or more different monomers at least one of them comprising a reactive group.
11. A process according to any one of the claims 1 to 10, wherein in step (c), the monomer  
15 comprises a reactive group,  
(i) said reactive groups are reacted with a further compound comprising an ethylenically unsaturated double bond,  
(ii) a hydrophilic monomer and optionally a co-monomer having a crosslinkable group are graft-polymerized to said ethylenically unsaturated double bond, and  
20 (iii) in case crosslinkable groups being present in step (ii), crosslinking of said groups is initiated.
12. A process according to claim 11, wherein, in step (i), the further compound comprising an ethylenically unsaturated double bond is a compound of formula (2a)-(2e) according to  
25 claim 7.
13. A process according to claims 11 or 12, wherein, in step (ii) the hydrophilic monomer is selected from the group consisting of acrylic acid, acrylamide, N,N-dimethylacrylamide and N-vinylpyrrolidone and no co-monomer having a crosslinking group is present.  
30
14. A coated material that is obtainable by the process of any one of the claims 1 to 13.
15. A coated material according to claim 14, which is a biomedical device.
- 35 16. A coated material according to claim 15, which is an ophthalmic device.
17. A coated material according to claim 16, which is a contact lens, intraocular lens or artificial cornea.